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ABRUS PRECATORIUS (GUNJA): COSMETICS USES AND OVERVIEW

Aishwarya Thorat*, Vishvajeet Rohom, Omkar Surwase and Reshma Dakhate

Student, At Post Khedle, Tal. Dindori, Nashik, Maharashtra, India.

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***Corresponding Author**
Aishwarya Thorat
Student, At Post Khedle,
Tal. Dindori, Nashik,
Maharashtra, India.

ABSTRACT

Abrus precatorius, also known as Rosary pea is one of the valuable plant species native to Asia and Australia. Despite the number of health benefits, it is also being used as an ornamental plant. These seeds are considered to be among the most beautiful and deadly in the world and are part of the Fabaceae family. They fall under the category of Upavisha, or semi-poisonous drugs, and are used extensively in many Ayurvedic formulations with significant therapeutic value. The alkaloid hypophorine and the toxic protein abrin are said to make gunja seeds toxic. There are numerous ways to detoxify gunja seeds, including utilizing kanji, milk, and water. The goal of the current study was to assess if an aqueous extract of Abrus precatorius leaf could promote hair development. It is a strong promoter of hair growth and is thought to work well for synthesizing hair growth. The time it took to cover a bald patch, the amount of hair that was produced, the proportion of hair follicles in the anagen and telogen phases, the timing of the initiation and completion of hair growth and the concentration of minerals in the blood were all taken into account when screening the petroleum ether of Abrus precatorius for its ability to promote hair growth. Since the vaidic era, Abrus precatorius, also referred to as gunja, has been utilized therapeutically.

KEYWORDS: Upavisha, Hypophorine, Pharmaceutical cosmetics, Detoxify gunja seeds, Ayurvedic formulations.

INTRODUCTION

The ancient traditional medical system known as Ayurveda uses a variety of drugs that are derived from the natural world. Although most of these medicines come from plants, they can also come from animals, metals, and minerals. Some of the ancient manuscripts and

scriptures that form the basis of Ayurvedic therapy are thousands of years old. The Vedas, which are thought to have been written as early as 6000 BC, the Samhitas (1500 BC–600 AD), Nighantu, and Samgraha Granthas (800 AD–1900 AD) are notable examples of these books since they contain comprehensive information about medicinal plants and formulations.

With each herb or plant being classified according to its therapeutic qualities and possible hazards, plant-based medicines are an essential part of Ayurveda. The beautiful but dangerous plant known as gunja (Abrus precatorius Linn.) is one of the plants mentioned in these ancient writings. It is regarded as one of the most dangerous seeds in the world and is a member of the Fabaceae family. According to Ayurvedic pharmacopoeias, it is a prime example of a semi-poisonous (upavisha) plant because, despite its colourful, appealing look, its seeds carry strong toxins.[25]

Since it dangerous and semi poisonous there are different ways to detoxify Gunja seeds, and further they are utilize in the form of traditional medicines.[21]

History

Approximately 7500 species of higher plants are thought to have therapeutic potential, making India one of the world's top producers of medicinal herbs.[1] Precatorius is the Latin for rose-colored beeds, while Abrus is a Greek term that signifies graceful in reference to flowers.[2] Since the vaidic era, Abrus precatorius, also referred to as gunja, has been utilized therapeutically. Traditional and folkloric medicine make use of roots, seeds, and leaves.[3] It is also known as Gunja in Sanskrit, in addition to Jequirity in English, Gunja and Gunchi in Hindi, and Gumchi and Gunja in Gujarati.

Plant Profile

Figure No. 1: Abrus precatorius.

Introduction of Plant

Abrus precatorius, commonly known as the rosary pea or jequirity bean, is a widely distributed climbing shrub belonging to the Fabaceae family. Native to tropical and subtropical regions of Asia and Africa, this plant is often recognized for its striking, bright red seeds with a characteristic black spot, which are used in jewelry and ornamental crafts. Despite its ornamental appeal, Abrus precatorius contains abrin, a potent and highly toxic protein found primarily in its seeds, which can be fatal if ingested. In traditional medicine, however, this plant has long been valued for its therapeutic properties. Various parts of the plant, including the leaves, roots, and seeds (when processed safely), are used to treat ailments such as fever, pain, inflammation, digestive issues, and infections. The plant also demonstrates promising anti-cancer, anti-diabetic, antimicrobial, and antioxidant activities. Given its dual nature both therapeutic and toxic careful handling and scientific scrutiny are essential in harnessing its medicinal benefits while minimizing the associated risks.

Abrus precatorius, commonly known as jequirity bean or rosary pea, is a climbing shrub that belongs to the Fabaceae family. The plant is native to tropical and subtropical regions of Asia, Africa, and some parts of Australia. Its seeds are often used for making jewelry and decorative items, but they are highly toxic and contain a potent toxin called abrin. Despite its toxic properties, Abrus precatorius is widely used in traditional medicine across various cultures, particularly in India, for its purported health benefits.

The plant Abrus precatorius has several synonyms in botanical literature. Here are the common synonyms associated with it:

Synonyms of Abrus precatorius

1. Abrus precatorius var. tenuifolius (Roxb.)
2. Abrus glycyphyllus Benth.
3. Abrus melanocephalus Benth.
4. Abrus serpentinus (L.) Schumach.
5. Abrus occidentalis Lour.
6. Vigna precatoria (L.) Kuntze.

These synonyms reflect earlier classifications and taxonomic changes as the plant was studied and described by various botanists. The most accepted and widely used scientific name remains Abrus precatorius.

Taxonomy and Etymology

Scientific Name: Abrus precatorius

Family: Fabaceae

Common Names: Rosary pea, Jequirity bean, Crab's eye, Indian licorice, and Gunja.

Etymology: The genus name Abrus is derived from the Greek word "abrus," meaning "bean," and "precatorius" refers to its use in making prayer beads or rosaries, as the seeds are often strung together due to their attractive appearance.[5]

Morphological Description

Plant Type: Twining shrub or climber

Leaves: The leaves are compound, alternate, and pinnate, with small leaflets that are oval-shaped and light green in color.

Flowers: The flowers are pink to purple in color, arranged in axillary clusters.

Fruit: The fruit is a flat, pod-like structure that contains 1-3 seeds, which are smooth, shiny, and bright red with a characteristic black spot, making them easily recognizable.

Seeds: The seeds are the most notable part of the plant, being highly toxic but also used for ornamental purposes due to their vivid appearance.

Phytochemical Constituents

Toxins: Abrin, a highly toxic protein similar to ricin, is found in the seeds of Abrus precatorius. It inhibits protein synthesis in cells, leading to cell death and potentially fatal poisoning if ingested.

Other Compounds: Alkaloids, flavonoids, saponins, tannins, and glycosides have also been identified in various parts of the plant. These compounds contribute to its medicinal properties, including anti-inflammatory, antimicrobial, and anti-cancer effects.

Abrus precatorius is known by various names across different languages and cultures, reflecting its widespread use and significance.[4]

Common English Names

- Rosary Pea
- Jequirity Bean
- Crab's Eye
- Indian licorice

- Gunja

Other Names

- Arabic: Al-Mutawakkil
- Chinese: Shaoguo
- French: Haricot de prière (Prayer Bean)
- Spanish: Fruto de la oración (Prayer Fruit)

These various names reflect the cultural and medicinal importance of Abrus precatorius in different parts of the world. Its seeds, with their distinctive appearance, are often used in jewelry and decorative items, while the plant itself holds significance in traditional medicine across various regions.

Occurrence and Geographical Distribution of Abrus Precatorius

Abrus precatorius is a tropical and subtropical plant that is widely distributed across many parts of the world, especially in regions with warm climates. It is native to Asia, Africa, and Australia but has since spread to various other continents due to its adaptability and human use.[23]

Below is an overview of its occurrence and distribution:

1. Native Distribution

Asia: Abrus precatorius is native to tropical and subtropical regions of Asia, particularly in India, Sri Lanka, and Southeast Asia. It is commonly found in the Indian subcontinent and other parts of Asia, including Myanmar, Thailand, and Malaysia.

Africa: The plant also grows in tropical regions of Africa, where it is found in countries like Sudan, Ethiopia, and West and Central Africa.

Australia: It is also native to tropical and subtropical areas of Northern Australia.

Abrus Precatorius is found in the southern region of India as well as the Himalayas.

2. Global Spread

The plant has spread too many other regions, both naturally and through human introduction, and is now found in a wide range of tropical and subtropical climates.

Caribbean: Abrus precatorius has been introduced to various islands in the Caribbean, where it is considered an invasive species in some areas.

Central and South America: The plant is found in several parts of Central and South America,

including countries like Brazil, Colombia, and Venezuela. Its spread in these regions has been facilitated by both trade and human activity.

Pacific Islands: It has also spread to islands in the Pacific, including Hawaii, where it has been introduced for ornamental purposes.

3. Habitat and Growing Conditions

Climate: Abrus precatorius thrives in tropical and subtropical climates with warm temperatures. It prefers well-drained soils and can tolerate a variety of soil types, including sandy and loamy soils.

Elevation: It typically grows at low to moderate elevations, but can also be found in some areas at higher altitudes in tropical mountain regions.

Habitats: This plant is commonly found in disturbed areas such as roadsides, agricultural fields, and open forests. It can also be found in areas like hedges, scrublands, and waste grounds. Being a climbing or twining shrub, it often grows over other vegetation, particularly in forest clearings and along fences.

4. Invasive Species

In some regions, particularly in the Caribbean and Pacific Islands, Abrus precatorius is considered an invasive species due to its rapid growth and ability to outcompete native vegetation. While it is not typically regarded as a major agricultural pest, its invasive nature can alter local ecosystems by shading out other plants.

5. Economic Importance

While Abrus precatorius is widely distributed due to its ornamental value (its seeds are used to make jewelry and prayer beads), it is also of interest for its medicinal properties in traditional healing systems. However, because of its toxicity, particularly in the seeds, the plant should be used with caution in medicine and is not widely cultivated for commercial purposes.

Abrus precatorius is widely distributed across tropical and subtropical regions of the world, both in its native range and in areas to which it has been introduced. Its occurrence in disturbed and cultivated lands reflects its ability to adapt to a variety of growing conditions. Despite its ornamental appeal, its toxic properties require careful management, particularly in regions where it is considered invasive.

Traditional Uses

Abrus precatorius has been used in traditional medicine systems, particularly in Ayurveda, for the treatment of a variety of ailments:

1. **Anti-inflammatory:** Used to reduce swelling and inflammation, especially in conditions like arthritis and joint pain.
2. **Pain Relief:** The seeds, when processed correctly, are used to relieve pain and discomfort, including in toothache and headache.
3. **Antipyretic:** It has been used as a fever-reducing agent.
4. **Digestive Issues:** It is sometimes used to treat dysentery and other digestive disturbances.
5. **Anti-cancer:** Some studies suggest that Abrus precatorius may have anti-cancer properties, particularly against breast and prostate cancer cells.
6. **Anti-diabetic:** The plant is used to manage blood sugar levels and is considered beneficial for diabetes.
7. **Antimicrobial:** The plant's extracts, particularly from leaves and roots, exhibit antimicrobial properties and are used for treating wounds and infections.[20]

Medicinal Applications

1. **Seed Extracts:** When processed safely, seed extracts have shown potential in treating various medical conditions. However, the seeds must be handled with extreme care because of their toxicity. In some traditional preparations, seeds are roasted or powdered before use, which can reduce the toxicity but should still be done cautiously.
2. **Leaf Extracts:** The leaves contain active compounds that are used to prepare extracts for treating infections, reducing fever, and managing inflammation.
3. **Root Extracts:** The roots are believed to have diuretic, purgative, and pain-relieving effects and are used in the management of chronic pain, gout, and other inflammatory conditions.

Toxicity and Safety Concerns

The seeds of Abrus precatorius are known for their high toxicity due to the presence of abrin, which is extremely dangerous if ingested, even in small quantities. The symptoms of poisoning may include nausea, vomiting, diarrhea, abdominal pain, and organ failure, leading to death in severe cases. As a result, extreme caution is advised in the use of this plant, particularly the seeds. In many traditional systems of medicine, the seeds are processed in specific ways to neutralize the toxin before being used therapeutically.[11]

Biological Activities

Recent studies have shown that Abrus precatorius possesses a range of bioactivities:

1. Antimicrobial: The plant's extracts have been demonstrated to inhibit the growth of various bacteria and fungi.

2. Anti-cancer: Several studies suggest that the plant has anti-cancer potential due to the presence of bioactive compounds that can induce cell apoptosis and inhibit tumor growth.

3. Antioxidant: The plant shows promise as an antioxidant agent, helping to combat oxidative stress, which is associated with various chronic diseases such as diabetes, cardiovascular disease, and cancer.

4. Anti-inflammatory: It has demonstrated significant anti-inflammatory properties, which can help in treating conditions like arthritis and other inflammatory diseases.

Microscopy and Quality Control

To ensure the proper use and authenticity of Abrus precatorius, both macroscopic and microscopic evaluations are essential. Macroscopic characteristics, like the distinct appearance of the seeds and leaves, can aid in identification, while microscopic studies, particularly of powdered plant material, can be used to detect adulteration and ensure the correct species is used. Evaluation techniques such as thin-layer chromatography (TLC) and high-performance liquid chromatography (HPLC) are also valuable for identifying key bioactive compounds.

Microscopy

1. Seeds: Transverse slice the transverse part of the seed has an almost round shape. Transverse section of seed demonstrates how the endodermis and epidermis of the outer testa are differentiated.[6] The majority of the testa is composed of the epidermis, which is composed of randomly organized, radially elongated cells that resemble palisades. A hyaline layer, or thin inner layer of the testa, is made up of cells that have collapsed. Large, isodiametric parenchyma cells with thick walls on the inside and tiny, thin-walled cells on the outside make up the endodermis. Broad, radially extended parenchymatous mesophyll cells make up cotyledons. There are lots of starch grains in it.[7]

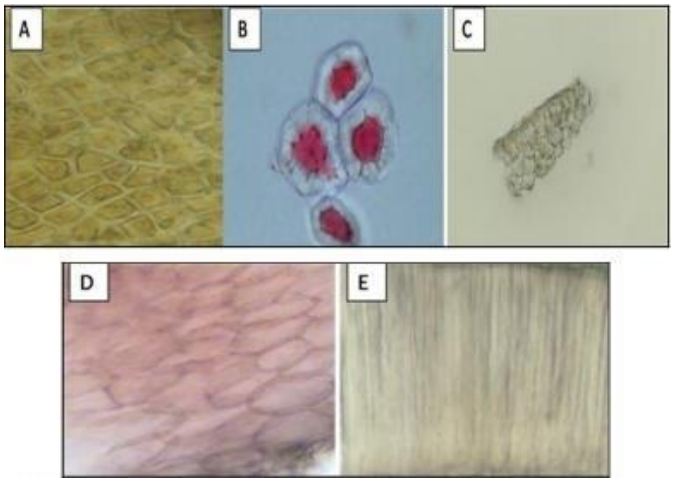


Figure No. 2: A, B: cotyledonary cells with aleuronic grains; C: group of bearer cells with parenchyma; D: fragments of hyaline layer; E: group of palisade-like cells of testa.

2. Leaves

Abrus precatorius leaves consist of the following characteristics:

Outer layer of skin

The leaf exhibits a single-layered epidermis on both the upper (adaxial) and lower (abaxial) sides. The cells are shaped like polygons and have walls that are thin. A cuticle may be present on the upper epidermis, whereas the lower epidermis is usually more noticeable because of the stomata. Stomata are small openings on the surface of a plant that allow for gas exchange. There are a greater number of stomata on the lower surface. The type they belong to is paracytic, with stomata enclosed by two subsidiary cells running alongside the guard cells.

Tiny hair-like structures on the surface of plants

Non-glandular, single-celled trichomes can be found on both sides of the leaf, but are more plentiful on the lower surface.

Mesophyll tissue

The mesophyll is divided into a palisade and spongy parenchyma. The palisade parenchyma usually has one or two layers of closely packed, elongated cells that are abundant in chloroplasts. The porous parenchyma is made up of cells arranged loosely with big gaps between them. Vascular bundles are a part of plants that transport nutrients and water throughout the plant.[24]

The midrib area displays a noticeable vascular bundle, with xylem on top and phloem at the bottom, enclosed by a bundle sheath. Xylem vessels have walls that are thick, while phloem components consist of sieve tubes and companion cells.

Gemstones

Calcium oxalate crystals, typically existing as druses or prismatic crystals, are present in the mesophyll cells.[7]

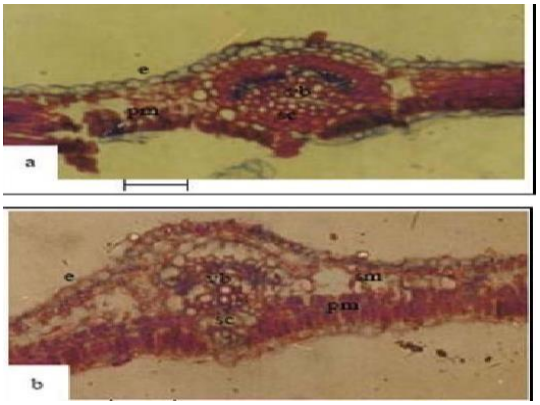


Figure No. 3: Microscopic image of Abrus Precatorius leaves.

Roots

The root's transverse section has a circular shape, with compact, rectangular-shaped cells seen in the outermost, irregular, fractured, thin cork zone (62.25±8.57 µm). The parenchymatous cortical zone, which had densely packed cells and a continuous ring of the stone layer within it, followed the cork. A distinct dark-colored phloem zone divided by thin parenchymatous ray-like structures following the cortex. The thickness of the phloem and cortex combined was 268.78±16.45 µm. The majority of the T.S. of the investigated root (747.13±17.33 µm) was made up of xylem tissue, which is present in the form of rays and has a mean radius of 1073.35±23.93 µm. distinct fibers, parenchyma cells, and xylem vessels made up the xylem. Xylem vessels were found in an unevenly distributed spoke-like pattern, with a mean lumen diameter of 52.32±8.19 µm. The vessels' lumen diameters ranged from 16.40 µm to 92.26 µm. There were thick medullary rays (two to eight cells wide) separating each xylem ray.[7]

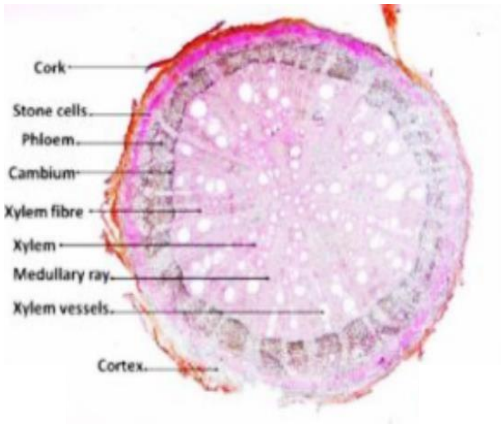


Figure No. 4: Microscopic view of T.S of roots.[24]

Cosmetic Values of Different Parts of Abrus Precatorius

The leaves, seeds, and roots of Abrus precatorius are among the several sections that have cosmetic values. To treat grey hair, a paste made of leaves and seeds is applied topically to the scalp. Gunja for hair demonstrates the effectiveness of using gunja topically as an herbal mask to the hair and scalp. At a dosage of 300 mg/kg, gunja seeds, leaves, and roots all exhibit hair growth- promoting properties.[8]

A **B** **C**

Figure No. 5: A–Leaves of Abrus precatorius, B-Roots of Abrus precatorius, and C-Seeds of Abrus precatorius.

Adulteration/Substituents

1. Cassia Tora: Because of their similar look, Cassia Tora seeds can be used in place of Abrus precatorius seeds.
2. Cassia occidentalis: Because of their comparable size and form, the seeds of this plant can similarly be employed as an adulterant. Additional plant materials: To give Abrus precatorius goods more weight or bulk, additional plant materials such as sawdust, rice flour, or other powders may occasionally be added.

3. Emblica officinalis (Amla): Because Amla extract has similar qualities to Abrus precatorius in terms of boosting hair development, it can be utilized as an alternative to the latter in hair care products.
4. Acacia concinna (Shikakai): Because of its comparable cleansing and hair-growth-promoting qualities, shikakai extract can be utilized as an alternative in hair care products.
5. Terminalia chebula (Haritaki): Because of its comparable anti-inflammatory and antioxidant qualities, Haritaki extract can be utilized as a stand-in in skin care products.[9]

Allied Species of Abrus Precatorius

There are major two species of Abrus Precatorius commonly known as Abrus Precatorius L. and Abrus Precatorius L.var.[10]

Table No. 1: Two Species of Abrus Precatorius.

Abrus precatorius L.	**Abrus precatorius L. var.**
Seeds two-third scarlet and the rest jet-black, almost round.	Seeds entirely pure white, oval.
Gynoecium long, c. 6-7 mm	Gynoecium short, c. 2.5-3.5 mm
Gynoecium more or less equal to length of longer filaments.	Gynoecium half the length of longer fila ments.
Style long, c. 2.5-3.0 mm long	Style very short, c. 0.5-0.8 mm long
Lower part of the wing petal narrower.	Lower part of the wing petal broader.
Keel petal ovate.	Keel petal elliptic.

Figure No. 6 A, C, E are Abrus precatorius L. and B, D, F are Abrus Precatorius L. var.

Geographical Distribution of Abrus Precatorius

The glorious wiry climber Abrus is widespread in tropical and subtropical regions. Abrus Precatorius is an Australian and Asian native. Abrus Precatorius is found in the southern region of India as well as the Himalayas.[4] The season of blossoming July through September. It frequently occurs in shrubs and hedges.[7]

Cultivation of Abrus Precatorius

When to plant: Plant the seeds in late spring or early summer when the soil is warm. You can sow the seeds directly in the soil or start them indoors 4 to 6 weeks before the last frost date.

Sunlight: Gunja plants can grow in full sun to partial shade.

Soil: Gunja plants grow best in drained soil

Watering: Gunja plants need medium watering.

Phytoconstituents of Abrus precatorius

Table No. 2: Phytoconstituents of Abrus precatorius.

Plant Parts	Chemical constituents
 **Leaves**	Glycyrrhizin, triterpene glycosides, pinitol and alkaloids such as abrine, hypaphorine, choline and precatorine, Abruslactone, Abrusoside, Inositol
 **Flowers and roots**	Glycyrrhizin and alkaloids like abrasine and precasine besides abrine, Abrol, Precol.
 **Seeds**	Abrine, hypaphorine, choline and precatorine (alkaloids present in seeds), abricin, cholesterol, Abrus agglutinin, Saponin, Flavonoids (Quercetin), Abrectorin, Precatorin, Lectin, campestanol

Phytoconstituents

Abrin: Despite being extremely poisonous, it may have an effect on cellular functions in very little quantities and under particular circumstances. But its poisonous nature restricts its application.

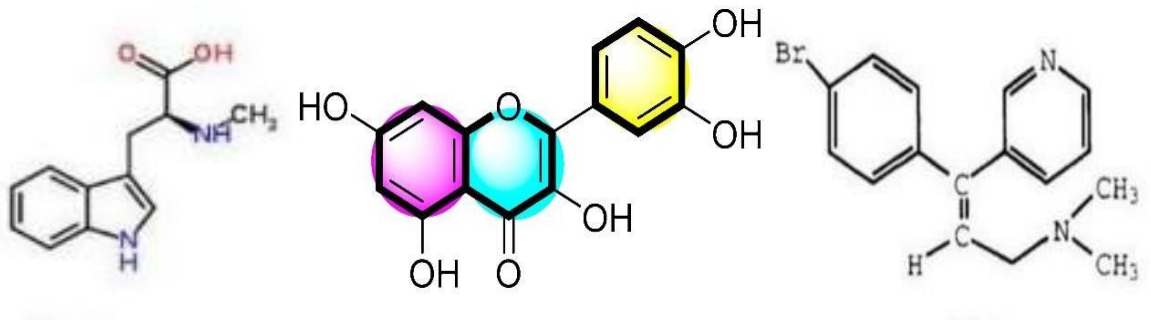
Flavonoids: Known for their antioxidant qualities, they may assist to improve the health of hair by lowering oxidative stress on the scalp. Similar to the active chemical in licorice root, glycyrrhizin may offer anti-inflammatory and anti-microbial qualities that help maintain the health of the scalp.

Tannins: Known for their astringent qualities, tannins may lessen irritation to the scalp and encourage a more favorable environment for the growth of hair.[22]

Alkaloids: Several biological activities have been linked to the alkaloids found in Abrus precatorius, and some of these activities may have an impact on hair development by inducing hair follicle stimulation.

Saponins: These substances may aid in fortifying hair follicles and stimulating the growth of new hair. Although these substances may have some advantages, it is important to see a doctor before using Abrus precatorius for hair growth or any other therapeutic purpose because of its toxicity, especially because it contains abrin.[4]

Structures of Major Phytoconstituents



Abrol Quercetin Abrine

Structures of Phytoconstituents.[25]

Cosmetic Uses of Abrus Precatorius

Gunja seeds oil

Because of the persistent itching, dryness, redness, and hair loss that are linked with dandruff, it can be a bothersome scalp condition. Malassezia furfur is the name of the fungus that causes this illness. Dandruff and hair loss can be avoided if gunja seed oil is administered to the afflicted scalp areas. Another way to promote hair development is to apply gunja oil to the scalp once a week.

How to use

- Grind one teaspoon of gunja seeds.
- Stir thoroughly after adding this to one tablespoon of bhringraj juice.
- Put the ingredients and two tablespoons of sesame oil in a pan.
- Simmer until no oil is left.
- Once it cools, transfer it to a glass bottle for storage.
- Apply a small amount of the gunja oil to your scalp.
- After leaving it overnight, wash it off the next day.[12]

Hair Mask

Hair mask made with gunja seed powder, bhringraj, brahmi, triphala, and coconut oil: How to use:

- Place a ½ teaspoon of powdered gunja seed in a bowl.
- Add one teaspoon each of triphala, brahmi, and bhringraj powders.
- To create an herbal pack, add two tablespoons of coconut oil.
- After 30 minutes, leave it on and rinse with lukewarm water.
- Twice a week, apply this herbal pack.[20]

Mask made of gunja seeds

How to use

- Use by combining 1 teaspoon powdered gunja seed with 2 tablespoons water to form a paste.
- After applying this paste on your scalp, let it sit there for half an hour.
- Use tap water to wash it off.

For those who have bald spots on their heads, this paste works well to reduce their baldness. It aids in encouraging the growth of new hair and hair renewal.[13]

Cosmetic Formulation/uses some other

- **Anti-aging creams**

The antioxidant qualities of Abrus precatorius extract are supposed to minimize wrinkles, age spots, and fine lines.

- **Products that brighten skin**

It is said that the plants extract balances skin tone and lessens hyperpigmentation.

- **Hair growth serums**

It is believed that Abrus precatorius will strengthen hair follicles, encourage hair growth, and lessen dandruff.

- **Acne remedies**

The plant's antibacterial and anti-inflammatory qualities might aid in the reduction of acne and shield against subsequent outbreaks.

- **Natural dyes**

The reddish-brown colour of Abrus precatorius seeds can be applied as a natural dye to skin and hair.

- **Lip balms**

Because of the extract's emollient qualities, lips can be moisturized and protected using it.

- **Face masks**

To detoxify, Abrus precatorius is occasionally used in face masks.[14][15]

Adverse Effect of Abrus Precatorius

As it is herbal drugs it has least Adverse effects. Most of the adverse effect are due to overdosing or over applying some effects are listed below,

- **Skin irritation:** Topical use may result in blistering, burning, itching, and redness of the skin.
- **Allergic responses:** The plant may cause severe reactions, including as anaphylaxis, in certain people.
- **Eye issues:** Contacting the eyes may result in keratitis, conjunctivitis, or even blindness.
- **Systemic toxicity:** Extremely rare instances of systemic toxicity, which includes symptoms including nausea, vomiting, diarrhea, and stomach discomfort, can result from absorption through the skin or mucous membranes.
- **Photosensitivity:** Some people may be more susceptible to the sun's rays, which can result in sunburn, blisters, or discolored skin.
- **Skin discoloration:** Hyperpigmentation or hypopigmentation may result from prolonged use.
- **Hair and scalp issues:** Applying something to your hair or scalp may cause itching, irritation, or even hair loss.[14][16]

Marketed formulation of Abrus precatorius

Table No. 3: Marketed formulation of Abrus precatorius.

Marketed Product	Brand Name	Company Name	Dose	Prize
Hair Growth Serum	Hair4U	Natural Remedies Pvt. Ltd.	2-3 ml, twice a day	$15-$25 (30ml)
Skin Brightening Cream	Glow Up	Cosmedic Remedies Pvt. Ltd.	Apply 1-2 times a day	$25-$35 (50g)
Anti-Aging Face Mask	Reviva	Ayurvedic Remedies Pvt. Ltd.	Apply 1-2 times a week	$10-$20 (100g)
Hair Care Shampoo	Hair Shield	Herbal Remedies Pvt. Ltd	5-7 ml, twice a week	$10-$20 (200ml)
5. Skin Toner	Skin Balance	Natural Essentials Pvt. Ltd.	Apply 1-2 times a day	$8-$15 (100ml)

HOME REMEDIES

Skin Concerns

Acne: To lessen acne and inflammation, pulverize Abrus precatorius seeds into a paste and apply it to the affected areas. Complexion tone: To make a face mask that brightens the complexion, combine Abrus precatorius powder, turmeric, and lemon juice.[18]

Wounds: To encourage healing, use paste made from Abrus precatorius to small cuts and scrapes.[19]

Hair Maintenance

Hair growth: To promote hair development, massage Abrus precatorius oil into the scalp.

Dandruff: To make a paste that lessens dandruff, combine Abrus precatorius powder with coconut oil.[17]

Health Concerns

Fever: To lower fever, drink tea made from Abrus precatorius seeds steeped in hot water. Digestive problems: To help with digestion, use powdered Abrus precatorius with warm water. Drink Abrus precatorius tea if you have menstrual cramps.[17]

CONCLUSION

This review concludes that Abrus precatorius is quite promising as a multi-purpose cosmetic agent as it shows high pharmacological and therapeutic potential. Because of its potential benefits for skin and hair care, Abrus precatorius, also known as Jequirity or Rosary Pea, has been traditionally employed in many cosmetic applications. Products made from the plant's seeds, leaves, and extracts have been used for Enhancing hair development, Toning and

lightening the skin, Preventing and treating acne, healing from wounds and protecting the skin. Although Abrus precatorius exhibits potential as a cosmetic element, it is imperative to acknowledge the Concerns about toxicity: The seeds of Abrus precatorius contain chemicals that can be dangerous if consumed or utilized in large quantities, such as abrin. Limited scientific evidence: To properly comprehend the plant's effects on human skin and hair, more research is required. Quality control: Verify that goods are produced by respectable businesses using appropriate quality control procedures. To safely use cosmetics made of Abrus precatorius: Adhere to instructions and suggested dosages. Patch test items before using them. See a dermatologist or other competent professional if you have any concerns.

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